

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following remarks is respectfully requested.

Claims 1, 2 and 4-15 remain active in this application; Claim 1 having been amended and Claim 3 canceled by the present amendment..

In the outstanding Office Action Claims 1-2 were rejected under 35 USC §102(b) as being anticipated by Swaminathan et al (U.S. Patent US 5,717,712); Claims 3-4 were rejected under 35 USC §103(a) as being unpatentable over Swaminathan et al in view of Garnache et al (U.S. Patent Application Publication US 2002/0071463 A1); Claims 5-6 were rejected under 35 USC §103(a) as being unpatentable over Swaminathan et al in view of Plizak et al (U.S. Patent US 3,725,566); Claims 7-10 were rejected under 35 USC §103(a) as being unpatentable over Swaminathan et al in view of Ziari et al (U.S. Patent US 6,215,809 B1); Claims 11-14 were rejected under 35 USC §103(a) as being unpatentable over Tarusawa et al (U.S. Patent US 5,812,296) in view of Swaminathan et al and further in view of Garnache et al (U.S. Patent Application Publication US 2002/0071463 A1); and Claim 15 was rejected under 35 USC §103(a) as being unpatentable over Tarusawa et al in view of Swaminathan et al, further in view of Garnache et al, and further in view of Domon et al (U. S. Patent US 5,771,111).

In light of the outstanding grounds for rejection, to expedite issuance of a patent from the present application, Claim 1 has been amended to include the feature stated in Claim 3 and Claim 3 has been canceled. Also, a typographical error has been corrected in the specification. No new matter has been added.

Applicants respectfully traverse the outstanding grounds for rejection, because in Applicants' view, amended Claim 1 patentably distinguishes over the applied prior art.

In particular, Swaminathan et al. disclose an optical transmitter comprising a) an adapter for holding an optical transmitter module, b) a heat exchange element connected to the adapter and c) a mounting block for supporting the heat exchange element. The object of Swaminathan et al. is to control temperature variations of a laser so as to make the output level stable without being affected by the environmental temperature variations. The conventional laser packages sated in Swaminathan et al. should hold the operating temperature to be within $\pm 0.1^{\circ}\text{C}$ of the desired temperature. However, Swaminathan et al. claims that the temperature control range of the laser can be widened to be within $\pm 1^{\circ}\text{C}$ of the desired temperature. Thus, it is clear that Swaminathan et al. is directed to maintaining constant temperature within a well defined range, whereas the claimed invention is directed to varying temperature to control wavelength.

In contrast, the object of the present invention is to adjust the amount of heat radiated from the exothermic-effect-only heat source of the light transmitter so as to control the wavelength of the optical signal output from the laser diode of the light transmitter.

Garnache et al., as noted in the outstanding Official Action, does in paragraph [0097] mention that “the VECSEL wavelength can be temperature –tuned with the thermoelectric tuning unit 150 or by MQM structure displacement.” However, merely because temperature tuning is generally known, does not provide motivation to apply temperature tuning to the Swaminathan et al. laser communication system. Indeed, Claim 1 recites that a wavelength of light oscillated by the laser diode is controlled by heat radiated from the exothermic-effect-only heat source. This feature is not related to the above-mentioned object of Swaminathan et al. and is contrary to the Swaminathan et al teaching of temperature control to maintain constant wavelength. It is respectfully submitted that the Swaminathan et al teaching of temperature control to maintain constant wavelength conflicts with the “temperature tuning” teaching of Garnache et al., and that there is no motivation provided in the references

themselves for applying the temperature tuning teaching of Garnache et al to the constant temperature system of Swaminathan et al. Since motivation for the combination must be provided in the references themselves, and not from Applicants' disclosure, it is respectfully submitted that the outstanding rejection is based on hindsight and is traversed.

Claims 11-15 are directed to a light transmitting system featured in that the optical multiplexing link is provided based on the wavelength control by merely using a heater. The system is inexpensive and simple in configuration, and operates based on unique algorithm because of using the heater. These features are not disclosed in Swaminathan et al and are not believed to be obvious over the references of record.

Consequently, in view of the present amendment and in light of the above discussion, it is respectfully submitted that Claims 1, 2 and 4-15 patentably define over the art of record and are in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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